ELECTRICAL SYMBOLS SINGLE POLE SWITCH @ +48" TO TOP OF DEVICE UNLESS NOTED SURFACE MOUNTED PANELBOARD 3-WAY POLE SWITCH @ +48" TO TOP OF DEVICE UNLESS NOTED FLUSH MOUNTED PANELBOARD SWITCH - KEY OPERATED MAIN SWITCHBOARD, MOTOR CONTROL CENTER OR DISTRIBUTION BOARD SWITCH WITH MOTION SENSOR CONCRETE PULLBOX, NOTE INDICATES PULL BOX DUAL SWITCH WITH MOTION SENSOR GROUP ON SHEET EGIOOR THERMAL OVERLOAD SWITCH TRANSFORMER FIXTURE ON EMERGENCY CIRCUIT 0 MOTOR OUTLET NON-FUSED DISCONNECT SWITCH - 30A, 3P, UNLESS LETTER INDICATES LIGHT FIXTURE TYPE AS NOTED OTHERWISE INDICATED ON FIXTURE SCHEDULE HOMERUN CONDUIT - STROKES INDICATE QUANTITY OF 0 LED FIXTURE CONDUCTORS LED FIXTURE CONDUIT AND/OR WIRE CONCEALED IN WALL OR ABOVE CEILING EXCEPT IN EXPOSED STRUCTURE AREAS 0 DOWNLIGHT FIXTURE --- CONDUIT AND/OR WIRE BELOW FLOOR OR GRADE DOWNLIGHT FIXTURE W/ INTEGRAL BATTERY BACK-UP CIRCUITING - STROKE WITH DOT INDICATES ISOLATED Вã EMERGENCY BATTERY LIGHTING UNIT WITH TWIN HEADS GROUND CONDUCTOR EMERGENCY BATTERY LIGHTING UNIT WITH TWIN HEADS _______ 1/2"-3 #12 & 1 #12 GRND THWN UNLESS NOTED WALL MOUNTED FIXTURE ________ 1/2"-4 #12 & 1 #12 GRND THWN UNLESS NOTED POLE MOUNTED FIXTURE EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED CIRCUIT BREAKER CEILING MOUNTED EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED GROUNDING ELECTRODE SINGLE METER WITH CT DOUBLE FACE EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED CEILING MOUNTED SHUNT TRIP DEVICE LOCATED IN METAL ENCLOSURE FIRE ALARM HORN WITH ADA/ANSI STROBE - WALL MOUNTED. ENTIRE WITH HINGED AND LOCKABLE COVER Φ_{s} LENS TO BE NOT LESS THAN 80" AND NOT GREATER THAN 96" AFF 110 CONDELLA UNO FEEDER - SIZE AS INDICATED ON FEEDER SCHEDULE SMOKE DETECTOR DIVISION 23 EQUIPMENT - SEE HVAC AND PLUMBING **X** FIRE ALARM MANUAL PULLSTATION @ +48" AFF TO TOP OF DEVICE TIMESWITCH 5'x7' HELCO PULL BOX PHOTOCELL (INSTALL ON ROOF FACING NORTH) DUPLEX RECEPTACLE @ +18" UNLESS NOTED GROUND BUS & GROUND ELECTRODES GECL RECEPTACLE @ +18" UNLESS NOTED DOUBLE DUPLEX RECEPTACLE @ +18" UNLESS NOTED DUPLEX RECEPTACLE @ +18" UNLESS NOTED SPECIAL RECEPTACLE @ +18" UNLESS NOTED RECEPTACLE INSTALLED ABOVE COUNTER

JUNCTION BOX

ELECTRICAL ABBREVIATIONS

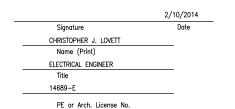
INDICATES MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE AFF OR AFG ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE LOCAL AUTHORITY HAVING JURISDICTION ALLIMINI IM ATS AUTOMATIC TRANSFER SWITCH MTS MANUAL TRANSFER SWITCH CONDUIT WITH PULL-LINE ONLY UNO AFCI INDICATES ARC FAULT CIRCUIT INTERRUPTER WITH DEDICATED NEUTRAL GROUND FAULT CIRCUIT INTERRUPTER WITH DEDICATED NEUTRAL GFP GRND HELCO ELECTRICAL UTILITY COMPANY NEC NATIONAL ELECTRICAL CODE, AS ADOPTED BY THE AHJ INDICATES PANEL S/N SOLID NEUTRAL SPD SURGE PROTECTION DEVICE TYP TYPICAL UNINTERRUPTIBLE POWER SYSTEM UPS WEATHER-PROOF (NEMA 3R) TRANSFORMER

> HAWAII COUNTY CODE- CHAPTER 5 - BUILDING 2006 IECC & ORDINANCES 09-48 & 10-68 BUILDING ENERGY EFFICIENCY STANDARDS

UNLESS NOTED OTHERWISE

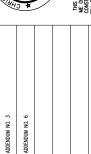
I CERTIFY THAT THE DESIGN IS IN CONFORMANCE WITH THE BUILDING ENERGY EFFICIENCY STANDARDS PERTAINING TO SECTION 506 ELECTRICAL POWER AND LIGHTING SYSTEMS

SECTION 506 ELECTRICAL POWER AND LIGHTING SYSTEMS









DECOM HOLE	2014-04-10 ADDENDUM NO. 3	2014-05-07 ADDENDUM NO. 6		
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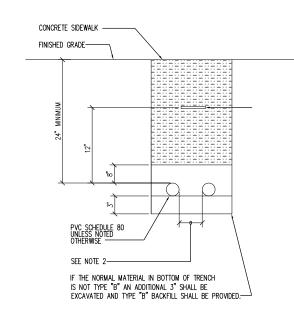


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BACKFILL:

. NON-CONTAMINATED NATIVE SOIL MATERIAL WHICH DOES NOT CONTAIN MORE THAN 50% GRAVEL, AND ALSO, DOES NOT CONTAIN HARD LUMPS OF EARTH 3 INCHES IN GREATEST DIMENSION, ROCKS LARGER THAN 3 INCHES IN LARGEST DIMENSION, HIGHLY PLASTIC CLAY, POORLY-GRADED SAND AND GRAVEL (CLASSIFIED AS SP AND GP USING THE UNITED SOIL CLASSIFICATION SYSTEM), ORGANICS, DEBRIS, OR OTHER UNSUITABLE OR DELETERIOUS MATERIALS.

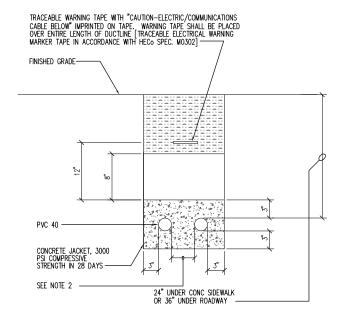
: SELECT GRANULAR MATERIAL PASSING A ONE (1) INCH SIEVE SUCH AS THREE-QUARTERS (3/4) INCH ACGREGATE BASE COURSE GRAVEL S4C OR MATERIAL THAT IS FREE OF ORCANICS DEBRIS OR HIGHLY-PLASTIC CLAY AND MEETS THE FOLLOWING GRADATION:

SIEVE SIZE	PERCENT PASSING BY WEIGHT
1"	100
3/4"	90-100
NO. 4	35–100
NO. 40	10-30
NO. 200	3–15

NOTES:

- WHERE TRENCH ENCOUNTERS EXISITING CONCRETE OR ASPHALT CONCRETE, SURFACE SHALL BE SAWCUT. BACKFILL, COMPACT AND PATCH SURFACE TO MATCH ADJACENT AREA.
- PROVIDE 3" SEPARATION BETWEEN DUCTS OF SAME SYSTEM AND 12" SEPARATION BETWEEN ELECTRICAL DUCTS AND DUCTS OF DIFFERENT SYSTEMS.

TYP. DUCT SECTION - DIRECT BURIED NOT TO SCALE



BACKFILL:

NON-CONTAMINATED NATIVE SOIL MATERIAL WHICH DOES NOT CONTAIN MORE THAN 50% GRAVEL, AND ALSO, DOES NOT CONTAIN HARD LUMPS OF EARTH 3 INCHES IN GREATEST DIMENSION, ROCKS LARGER THAN 3 INCHES IN LARGEST DIMENSION, HICHLY PLASTIC CLAY, POORLY-GRADED SAND AND GRAVEL (CLASSIFIED AS SP AND GP USING THE UNITED SOIL CLASSIFICATION SYSTEM), ORGANICS, DEBRIS, OR OTHER UNSUITABLE OR DELETERIOUS MATERIALS.

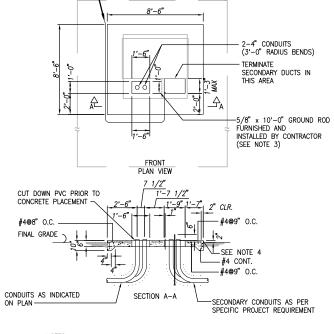
: SELECT GRANULAR MATERIAL PASSING A ONE (1) INCH SIEVE SUCH AS THREE-QUARTERS (3/4) INCH AGGREGATE BASE COURSE GRAVEL, S4C OR MATERIAL THAT IS FREE OF ORGANICS DEBRIS OR HIGHLY-PLASTIC CLAY AND MEETS THE FOLLOWING GRADATION: TYPE "B"

SIEVE SIZE	PERCENT PASSING BY WEIGHT
1"	100
3/4"	90-100
NO. 4	35–100
NO. 40	10-30
NO. 200	3–15

NOTES:

- ELECTRICAL AND TELEPHONE DUCTS SIMILAR.
- PROVIDE 1-1/2" SEPARATION BETWEEN DUCTS OF SAME SYSTEM AND 3" BETWEEN DUCTS OF
- WHERE TRENCH ENCOUNTERS EXISTING CONCRETE OR ASPHALT CONCRETE, SURFACE SHALL BE SAWOUT. BACKFILL, COMPACT AND PATCH SURFACE TO MATCH ADJACENT AREA. SEE TRENCH RESTORATION DETAIL.
- 4. SEE DUCT SECTION DETAILS FOR CONDUIT ARRANGEMENT

TYP. DUCT SECTION - CONC. ENCASED NOT TO SCALE



ADDITIONAL 5/8" x 8'-0" GROUND ROD (SEE NOTE 3). TOP OF ROD 12" BELOW

GRADE

-EDGE OF REQUIRED CLEARENCE. (SEE NOTE 7)

- 1. VERIFY ALL REQUIREMENTS WITH FIGURE 3-12A, HELCO ELECTRIC
- SERVICE INSTALLATION MANUAL.

 2. REFER TO STD. 30–5000 FOR LOCATION AND CLEARANCES.

 3. REFER TO STD. 22–2005 FOR 3 PHASE PADMOUNTED TRANSFORMER REQUIREMENTS.
- 4. % DIAMETER x 10'-0" GROUND ROD (STOCK CODE 19347) FURNISHED BY UTILITY AND INSTALLED BY CUSTOMER. IF GROUND RESISTANCE IS BY UTILITY AND INSTALLED BY CUSTOMER. IF GROUND RESISTANCE IS MORE THAN 25 OHMS, INSTALL ADDITIONAL % DIAMETER X 8'-0' GROUND ROD (STOCK CODE 101527) AND CONNECT 4/0 BARE COPPER GROUND ROD STOCK COPE 101527) AND CONNECT 6/0 BARE COPPER GROUND ROD WILL PROBABLY BE REQUIRED WHEN SOIL RESISTIVITY IS GREATER THAN 67 OHM—METERS.

 CONCRETE: 3000 PSI COMPRESSIVE STRENGTH IN 28 DAYS. MOISTURE CUE CONCRETE PAD A MINIMUM OF 7 DAYS. DO NOT INSTALL TRANSFORMER UNTIL CONCRETE COMPRESSIVE STRENGTH REACHES 1,500 PSI MINIMUM OR AFTER 14 DAYS.

 6. REINFORCING: ASTM A615, GRADE 40 MINIMUM.

 7. LOCATE, SECURE, AND CAP ALL CONDUITS BEFORE POURING PAD. TOP OF CONCRETE TO BE SMOOTH AND TRUE, WOOD—FLOAT FINISH, FREE OF DEFECTS, AS PER CITY AND COUNTY SPECIFICATIONS. ROUND ALL EXPOSED EDGES TO ¾" CHAMFER.
- EXPOSED EDGES TO 3/" CHAMFER.
- MANINTAIN A RELATIVELY LEVEL, MINIMUM CLEARENCE OF 2'-6" FROM SIDES OF THE PAD, 2'-0" FROM THE BACK OF THE PAD, AND 8'-0" IN FRONT OF THE PAD. EXTEND CONCRETE PAD AN ADDITIONAL 8'-O" IN FRONT IF LOCATED IN PLANTING AREA.

500 KVA COMMERCIAL UTILITY PAD MOUNT XFMR DETAIL

NOT TO SCALE







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REVIEWED:	ED:		

3 **PLAN**

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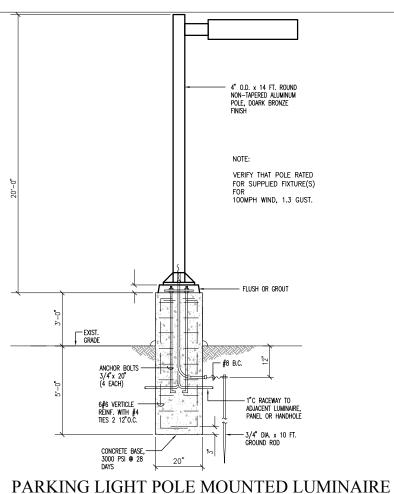
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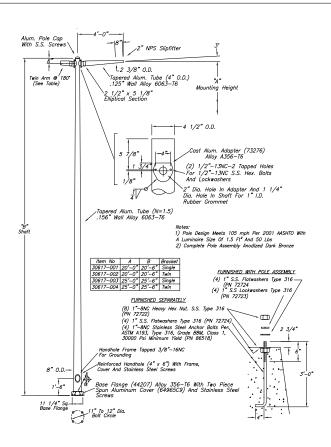
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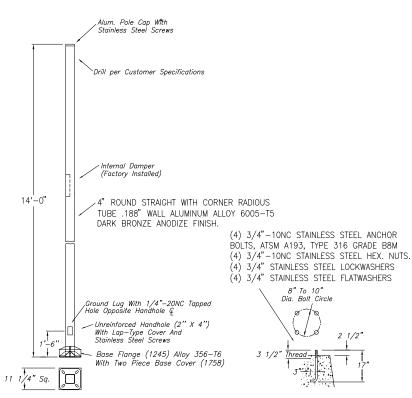
COUNTY (DEPARTMENT)



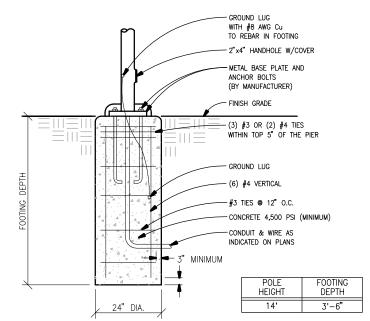
AND CONCRETE BASE DETAIL



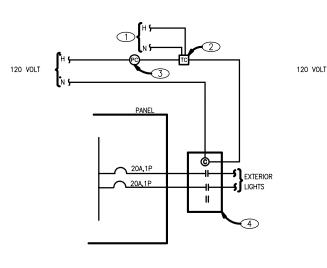
ROADWAY/PARKING POLE DETAIL



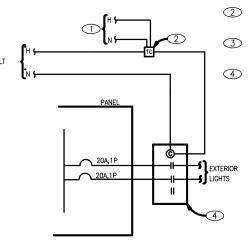




WALK WAY POLE MOUNTED LUMINAIRE AND CONCRETE BASE DETAIL



WALKWAY LIGHTING CONTACTOR DETAIL SCALE: N.T.S.



NOTES

 \bigcirc 120 VOLT POWER TO TIMECLOCK

TIMECLOCK TORK 7100 SPST 120V MOUNT ABOVE

PHOTOCELL TORK 2100 SERIES SPST 120 VOLT MOUNT ON ROOF FACING NORTH.

ELECTRICALLY HELD SQUARE D CLASS LIGHTING
CONTACTOR 8903 LG SERIES 30AMP RATED WITH
120 VOLT OR 277 VOLT PULL IN COIL AS REQUIRED.
PROVIDE QUANTITY OF CONTACTS AS REQUIRED PER
DRAWINGS AND/OR SCHEDULE. IF MORE THEN 12 CONTACTS ARE REQUIRED. PROVIDE ADDITIONAL CONTACTOR(S) WITH COILS WIRE IN PARALLEL.

REVISED ENTIRE SHEET

PARKING/ROADWAY LIGHTING **CONTACTOR DETAIL** SCALE: N.T.S.





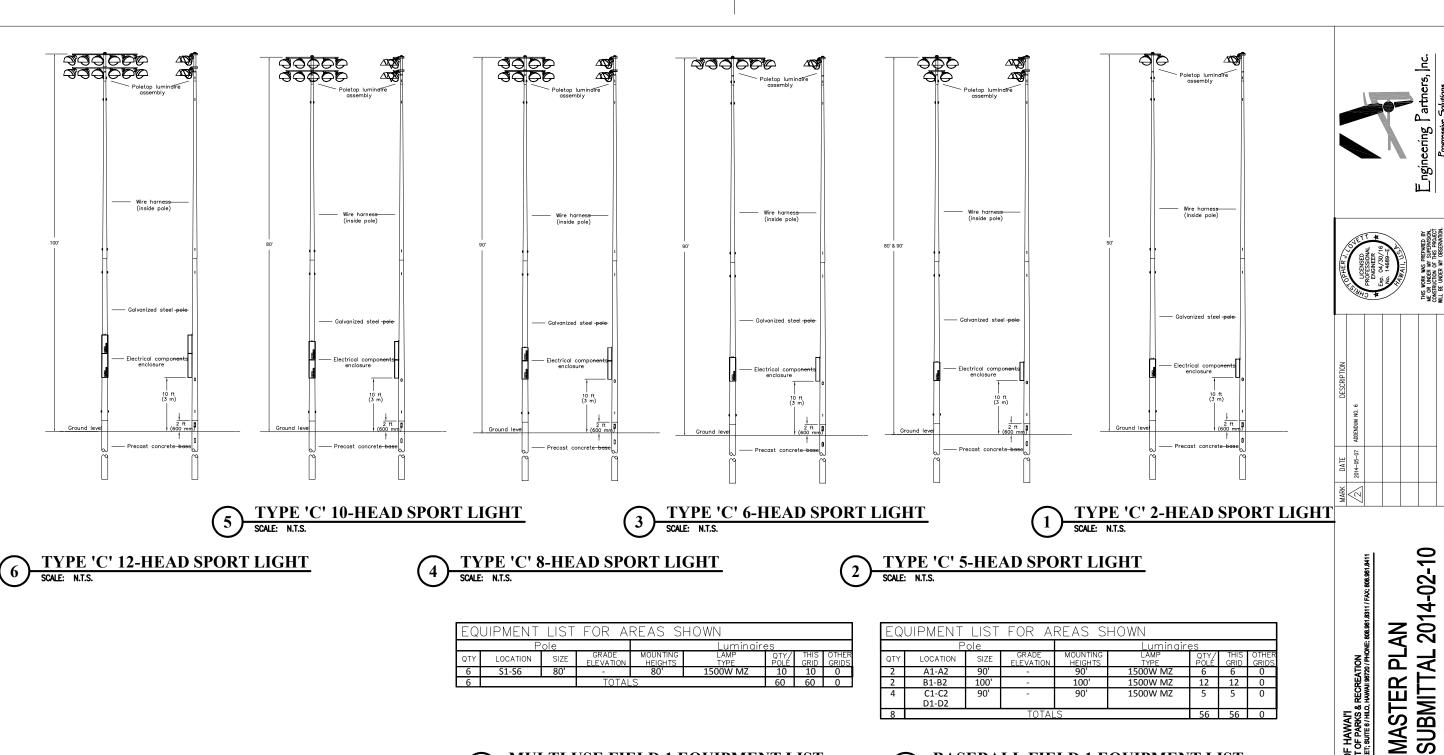
SUBMITTAL 2014-02-10 PAHOA, PUNA, HAWAII **PLAN** MASTER

COUNTY OF HAWAI'I DEPARTMENT OF PARKS & **PARK**

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AREAS SHOWN QUIPMENT SIZE

EQ	QUIPMENT LIST FOR AREAS SHOWN										
	Р	'ole			Luminaires						
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHTS	LAMP TYPE	QTY/ POLE	THIS GRID	OTHEI GRIDS			
2	A1-A2	90'	-	90'	1500W MZ	6	6	0			
2	B1-B2	100'	-	100'	1500W MZ	12	12	0			
4	C1-C2 D1-D2	90'	-	90'	1500W MZ	5	5	0			
		•									

MULTI USE FIELD 1 EQUIPMENT LIST SCALE: N.T.S.

$\overline{}$	BASEBALL FIELD 1 EQUIPMENT LIST SCALE: N.T.S.
	SCALE: N.T.S.

EQUIPMENT LIST FOR AREAS SHOWN										
	Pole				Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHTS	LAMP TYPE	QTY/ POLE	THIS GRID	OTHER GRIDS		
2	P1-P2	50'	-	50'	1500W MZ	2	2	0		
2			TOTAL	S		4	4	0		

	EQUIPMENT LIST FOR AREAS SHOWN										
	Pole					Luminaires					
	QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHTS	LAMP TYPE	QTY/ POLE	THIS GRID	OTHER GRIDS		
	6	S7-S12	80'	-	80'	1500W MZ	10	10	0		
	6			TOTAL	S		60	60	0		
•				101716			- 00	- 00			

EQI	JIPMENT	LIST	FOR A	reas s	HOWN			
Pole			Luminaires					
QTY LOCATION SIZE GRADE ELEVATION					THIS GRID	OTHER GRIDS		
4	A3-A4	80'	-	80'	1500W MZ	5	5	0
	C3-C4							
2	B3-B4	90'	-	90'	1500W MZ	8	8	0
6	•		TOTAL	S	36	36	0	

MULTI USE FIELD 2 EQUIPMENT LIST (ADD. ALT.) SCALE: N.T.S.

SKATE PARK EQUIPMENT LIST (ADD. ALT.) SCALE: N.T.S.



BASEBALL FIELD 2 EQUIPMENT LIST (ADD. ALT.) SCALE: N.T.S.

PARK MASTER PLAN COUNTY OF HAWAI'I DEPARTMENT OF PARKS 8 101 PAUAH STREET; SUITE 6/HILD **EGI004**

SWITCHING SCHEDULE

Field/Zone Description	Zones
Baseball 1	1
Baseball 2 (ADD.ALT)	2
Multi Use 1	3
Multi Use 2 (ADD.ALT)	4
Choto Dork (ADD ALT)	-

MODULE

ADD. ALT. #

ADD. ALT.

ADD. ALT.

ADD. ALT. #

ADD. ALT. #

ADD. ALT. #

ADD. ALT. #

ADD. ALT. #2

ADD. ALT. #2 ADD. ALT. #2

ADD. ALT. #

C2

C3

C6

C8

C9

C10

C11

C12

C13

C15 C16

C17

C18

C19 C20

C21 C22

C23

C24

C25 C26

C14

CONTROL POWER CONSUMPTION								
120V Single Phase								
VA loadir of Vendo		INRUSH: 5575.0						
Supplied		SEALED: 695.0						

BALLAST SPECIFICATIONS .90 Minimum Power Factor		VOLTAGE: 480V			THREE PHASE			
BALLAST OPERATING VOLTAGE	208	220	240	277	347	380	480	
1500 Watt Metal Halide Lamp Operating line amperage per fixture - minimum	8.6	8.3	7.5	6.5	5.1	4.7	3.7	
1000 Watt Metal Halide Lamp Operating line amperage per fixture - minimum	6.5	6.4	5.8	4.9	4.0	3.6	2.9	

	CIRCUIT SUMMARY BY ZONE						
	POLE	CIRCUIT DESCRIPTION	# OF FIXTURES	FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CONTACTOR	ZONE
	A1	Baseball 1	6	14.8	30	C1	1
	A2	Baseball 1	6	14.8	30	C2	1
	B1	Baseball 1	12	29.6	40	C3	1
	B2	Baseball 1	12	29.6	40	C4	1
	C1	Baseball 1	5	14.8	30	C5	1
	C2	Baseball 1	5	14.8	30	C6	1
	D1	Baseball 1	5	14.8	30	C7	1
	D2	Baseball 1	5	14.8	30	C8	1
ADD. ALT. #	1 A3	Baseball 2	5	14.8	30	C9	2
ADD. ALT. #	1 A4	Baseball 2	5	14.8	30	C10	2
ADD. ALT. #	1 B3	Baseball 2	8	22.2	30	C11	2
ADD. ALT. #	B4	Baseball 2	8	22.2	30	C12	2
ADD. ALT. #		Baseball 2	5	14.8	30	C13	2
ADD. ALT. #	C4	Baseball 2	5	14.8	30	C14	2
AUU. ALI. #1	S1	Multi Use 1	10	25.9	40	C15	3
	S2	Multi Use 1	10	25.9	40	C16	3
	S3	Multi Use 1	10	25.9	40	C17	3
	S4	Multi Use 1	10	25.9	40	C18	3
	S5	Multi Use 1	10	25.9	40	C19	3
	S6	Multi Use 1	10	25.9	40	C20	3
ADD. ALT. #2	2 S7	Multi Use 2	10	25.9	40	C21	4
ADD. ALT. #2	2 S8	Multi Use 2	10	25.9	40	C22	4
ADD. ALT. #2	S9	Multi Use 2	10	25.9	40	C23	4
ADD. ALT. #2		Multi Use 2	10	25.9	40	C24	4
ADD. ALT. #2		Multi Use 2	10	25.9	40	C25	4
ADD. ALT. #2		Multi Use 2	10	25.9	40	C26	4
ADD. ALT. #3	3 P1	Skate Park	2	7.4	30	C27	5
ADD. ALT. #3		Skate Park	2	7.4	30	C28	5

PANEL SUMMARY

Pole A1

Pole A2 Pole B1

Pole B2 Pole C1

Pole C2

Pole A3

Pole A4

Pole B3

Pole B4

Pole C3

Pole C4

Pole S1 Pole S2

Pole S3

Pole S4

Pole S5

Pole S7 Pole S8

Pole S9

Pole S10

Pole S11

Pole S12

Pole P1

Pole S6

FULL LOAD AMPS

14 80

29.60

29.60 14.80

14.80

14.80

14.80

14.80

14.80

22.20

22.20

14.80

14.80

25.90 25.90

25.90

25.90

25.90 25.90

25.90

25.90

25.90

25.90

25.90 25.90

7.40

PANEL ID

CBH2

CBH2

CBH2 CBH2

CBH2

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CBH2

CBH2

CBH1 CBH1

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CSH

				CIRCUIT	DESCRIPTION
	ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	POLE ID	CONTACTOR ID
	Zone 1	1	Baseball 1	A1	C1
				A2	C2
				B1	C3
				B2	C4
				C1	C5
				C2	C6
				D1	C7 C8
				D2	
	Zone 2	2	Baseball 2	A3	C9
				A4	C10
				B3	C11
ADD ALT #4				B4	C12
ADD. ALT. #1				C3	C13
				C4	C14
	Zone 3	3	Multi Use 1	S1	C15
				S2	C16
				S3	C17
				S4	C18
				S5	C19
				S6	C20
	Zone 4	4	Multi Use 2	S7	C21
				S8	C22
ADD. ALT. #2				S9	C23
ADD. ALI. #2				S10	C24
				S11	C25
				S12	C26
ADD. ALT. #3	Zone 5	5	Skate Park	P1	C27
7,00. ALI. #0				P2	C28

ZONE SCHEDULE

LIGHTING CONTROL ZONE SCHEDULE



BREAKER POSITION

7,9,11

13,15,17

19,21,23

2,4,6

8,10,12

14,16,18

20,22,24

25,27,29

31.33.35

37.39.41

26,28,30

32,34,36

38,40,42

2,4,6 8,10,12

14,16,18

20 22 24 26,28,30

32,34,36

7,9,11

13,15,17

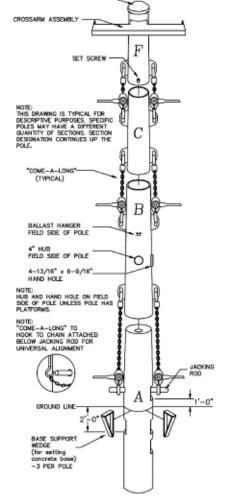
19,21,23

25,27,29

31,33,35

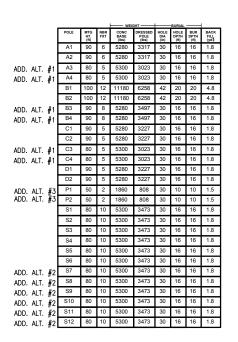
38.40.42

7,9,11

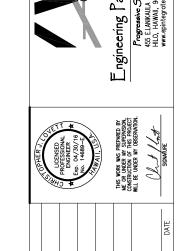


Electrical (provided	VI II I			m		
(provided overcurrer	by customer for at protections	- E		m		
	Com	nitrol and nitoring inet	. WHE	land ring		
	Equipment ground To lig	hting circuits	To lightin	g circuits		-11
Wire	Bescripties	ë ef Wines	Typ. Wine Size (AWS)	Max. Wire Longth (FT)	Wire from Musce	Motes
_	ine power to contactors, and equipment grounding conduct		Note 8	27	No	A-E
_	and power to lighting circuits	Note A	Note 8	N/A	No	A-D
	Control power (dedicated, 20A)	3	12	N/A	No	0, D
4 (Control barnesses	Note G		8.	Yes"	C, D, G
5 (Communication cable (RS – 485)	1		8*	Yes"	C, D
6 5	Surge protection device to distribution panel			N/A	Yes	F
7 5	Surge protection device monitoring	3	14	N/A	Yes	G, D, F
Motes:	Wolfage and phasing per the notes on cover page. Calculate per tood and voltage drop. Minimum conduit diameter. Wire 4 requires 2" (for connector ends to pass thin b. Wire 5 requires 7" for connector ends to pass thin.					R60-10-00_8

FIELD LIGHITNG CONTROL SYSTEM







	MARK	DATE	
×	$\langle \overline{\zeta} \rangle$	2014-05-07	2014-05-07 ADDENDUM NO. 6
PHONE: 608.981.8311 / FAX: 808.981.8411			
NΔI			
L 2014-02-10			
II TMK: (3) 1-5-002:020	REVIEWED:	ë	

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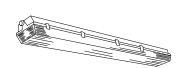
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COUNTY OF HAWAI'I DEPARTMENT OF PARKS & 101 PAUAH STREET; SUITE 6 / HILD,

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LIGHTING CONTROL PANEL SCHEDULE



FEATURES

LAMP TYPE: LED SHIELDING: ACRYLIC WATTAGE: 50W

OPTIONS

MOUNTING: DOUBLE PENDANT (DPK OPTION) +9'-0" TO BOTTOM OF FIXTURE. VERIFY HEIGHT WITH ARCHITECTURAL PLANS.

NOM. DIMENSIONS: 4" H X 6" W X 50" L

SPECIFICATIONS

MANUFACTURER: LITHONIA, PHILLIPS, COLUMBIA OR APPROVED EQUIVALENT PART NO. (BASIS OF DESIGN): BEGHELL: ILLUMINIA BS100LED-4-HT-50W-WT35-120/277V-JM HOUSING: MOLDED HIGH-IMPACT POLYESTER OR FIBERGLASS REINFORCED PLASTIC WITH COLD ROLLED STEEL INTERIOR COMPONENTS

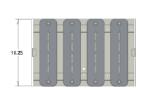
REFLECTORS: INTERNAL WHITE REFLECTOR ELECTRICAL: 120 OR 277 VOLT DRIVER

FINISH: WHITE PAINTED

OTHER: UL LISTED FOR WET LOCATION. PROVIDE EMERGENCY BALLAST WHERE NOTED ON PLANS

TYPE 'D' FIXTURE





FEATURES

LAMP TYPE: LED WATTAGE:

OPTIONS

MOUNTING: 1/2" PENDANT MOUNT OPTIC DISTRIBUTION: TYPE V SHORT

MANUFACTURER: C&W SOLUTIONS OR APPROVED EQUIVALENT PART NO. (BASIS OF DESIGN): CWES-OFBL-74-4-4-U-W-50 HOUSING: WHITE POWDER COATING EXTRUDED STEEL

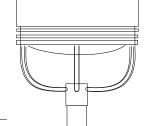
MAINTAINED OUTPUT: 12,000 LUMENS

REFLECTOR: TYPE V DISTRIBUTION (SHORT) ELECTRICAL: 120 OR 277 VOLT DRIVER

FINISH: BLACK POWDER COAT

OTHER: UL LISTED FOR WET LOCATION, 5000K

TYPE 'G' FIXTURE



WATTAGE: OPTIONS

LAMP TYPE: LED

FEATURES

MOUNTING: 14' POLE (REFER TO DETAILS 1&6/EGI003) OPTIC DISTRIBUTION: TYPE III

PHOTOCELL MOUNTED ON UNIT

SPECIFICATIONS

MANUFACTURER: C&W SOLUTIONS OR APPROVED EQUIVALENT PART NO. (BASIS OF DESIGN): CWES-HSM-74-2-4-U-B-50-SF7

HOUSING: EXTRUDED ALUMINUM EFFICACY (LUMEN/W): >82 @ 5000K

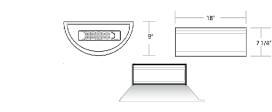
REFLECTOR: TYPE III DISTRIBUTION

ELECTRICAL: 120 OR 277 VOLT DRIVER

FINISH: ANNODIZED BRONZE

OTHER: UL LISTED FOR WET LOCATION, 5000K WITH BLUE LIGHT FILTER

TYPE 'B' FIXTURE



FEATURES

OPTIONS

LAMP TYPE: LED SHIELDING: SHATTER RESISTANT WATTAGE: 32W

MOUNTING: SURFACE

NOM. DIMENSIONS: 6.5" H X 17.5" W X 8.5" L

SPECIFICATIONS

MANUFACTURER: C&W SOLUTIONS OR APPROVED EQUIVALENT PART NO. (BASIS OF DESIGN): CWES-WO-74-9-U-G-50-SF7 HOUSING: ALUMINUM CAST, BRONZE

EFFICACY (LUMENS/W): >102 @ 5000K

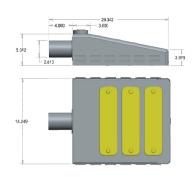
REFLECTORS: FULL CUT OFF

ELECTRICAL: 120 OR 277 VOLT DRIVER

FINISH: BRONZE

OTHER: UL LISTED FOR WET LOCATION, 5000K WITH BLUE LIGHT FILTER





FEATURES

LAMP TYPE: LED WATTAGE: SINGLE ARM: 90W, DUAL ARM: 180W

OPTIONS

MOUNTING: 20' POLE W/ ARM NUMBER PER PLANS REFER TO DETAILS 2&3/EGI003 FOR PARKING REFER TO DETAILS DETAILS 2/EGI003 AND 4/EGI007 FOR ROADWAY OPTIC DISTRIBUTION: TYPE II PHOTOCELL MOUNTED ON UNIT

SPECIFICATIONS

MANUFACTURER: C&W SOLUTIONS OR APPROVED EQUIVALENT PART NO. (BASIS OF DESIGN): CWES-F4-120-M1A-U-P-A-50-PC HOUSING: EXTRUDED ALUMINUM

EFFICACY (LUMEN/W): >90 @ 5000K REFLECTOR: TYPE III DISTRIBUTION ELECTRICAL: 120 OR 277 VOLT DRIVER

FINISH: ANNODIZED BRONZE

OTHER: UL LISTED FOR WET LOCATION, 5000K WITH BLUE LIGHT FILTER





NOM. DIMENSIONS: 8" DIA. X MAX. 8" D

SPECIFICATIONS

MANUFACTURER: LITHONIA OR APPROVED EQUIVALENT PART NO. (BASIS OF DESIGN): DOM8LED-1500L-3500K-D08AZ-TRW REFLECTORS: CLEAR SEMI-SPECULAR ALZAK ALUMINUM, LOW IRIDESCENT WITH SELF FLANGE

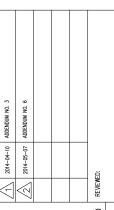
ELECTRICAL: UNIVERSAL VOLTAGE

OTHER: UL LISTED FOR DAMN LOCATION









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TYPE 'H' FIXTURE

A12125 PATTERN ACRILIC

MANUFACTURER: KENALL, LITHONIA, COLUMBIA OR APPROVED EQUIVALENT PART NO. (BASIS OF DESIGN): COLUMBIA LJT2435LWGFAA12125EU

HOUSING: MARINE GRADE ALUMINUM, EXTRUDED BODY WITH DIE-CAST END CAPS

MOUNTING: GRID CEILING NOM. DIMENSIONS: 4" H X 24" W X 48" L

FEATURES

SHIELDING:

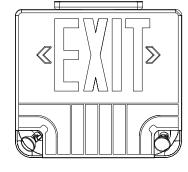
OPTIONS

LAMP TYPE: LED

WATTAGE: 40W

SPECIFICATIONS

FINISH: MATTE WHITE



FEATURES WATTAGE: 25W

MANUFACTURER: PHILLIPS, COLUMBIA, LITHONIA,

OR APPROVED EQUIVALENT
PART NO. (BASIS OF DESIGN): BEGHELLI FTZ-C-12V-42W-LG-1-U
LAMP TYPE: LED

MOUNTING: UNIVERSAL LETTERS: GREEN

NOM. DIMENSIONS: 13-3/4" W X 12" H X 2" D

GENERAL DESCRIPTION
HOUSING: FLAME RATED, UV STABLE ABS DIECAST ALUMINUM 6"H LETTERS WITH 3/4" STROKE.

PROVIDE POLYCARBONATE VANDAL SHEILD. ELECTRICAL: 120 OR 277 VOLT

FINISH: WHITE

OTHER: MINIMUM BRIGHTNESS 20 CD/SQ METER ON FACE OF SIGN.

TYPE 'XB' FIXTURE - PLAY COURT

FEATURES WATTAGE: 5W

MANUFACTURER: PHILLIPS, COLUMBIA, LITHONIA,

OR APPROVED EQUIVALENT PART NO. (BASIS OF DESIGN): LAMP TYPE: LED BEGHELLI FTZ-SA-LG-1-U

MOUNTING: UNIVERSAL LETTERS: GREEN

NOM. DIMENSIONS: 12" W X 8 3/4" H X 1 5/8" D

GENERAL DESCRIPTION
HOUSING: FLAME RATED, UV STABLE ABS DIECAST ALUMINUM 6"H LETTERS WITH 3/4" STROKE. PROVIDE POLYCARBONATE VANDAL SHEILD.

ELECTRICAL: 120 OR 277 VOLT

FINISH: WHITE

OTHER: MINIMUM BRIGHTNESS 20 CD/SQ METER ON FACE OF SIGN.

TYPE 'XA' FIXTURE - PLAY COURT

MANUFACTURER: PHILLIPS, COLUMBIA, LITHONIA, OR APPROVED EQUIVALENT OR APPROVED EQUIVALENT
PART NO. (BASIS OF DESIGN): BEGHELLI BRV-12-42LAMP TYPE: 6W HALOGEN
MOUNTING: UNIVERSAL
NOM. DIMENSIONS: 12" W X 8 3/4" H X 1 5/8" D BEGHELLI BRV-12-42-NC

GENERAL DESCRIPTION
HOUSING: FLAME RATED, UV STABLE ABS DIECAST ALUMINUM PROVIDE POLYCARBONATE VANDAL SHEILD

ELECTRICAL: 120 OR 277 VOLT

FINISH: WHITE

FEATURES

OTHER: 6W HALOGEN LAMP INCLUDED WITH FIXTURE

TYPE 'XC' FIXTURE - PLAY COURT









Engineering Partn

2014-04-10 ADDENDUM NO. 3	2014-05-07 ADDENDUM NO. 6			
2014-04-10	2014-05-07		ED:	
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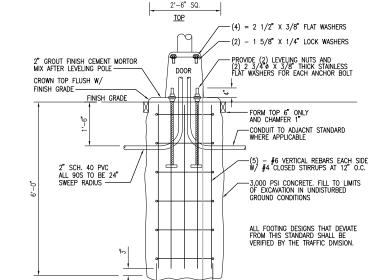
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-1/2" DRAIN HOLE

-GROUND ROD

-GROUT

2" SCH. 40 PVC FOR

ADDITIONAL GROUND CONNECTION

PROPERTY LINE

NOTES:

1. IF FOUNDATIONS ARE PRECAST, MANUFACTURER AND MATERIALS SUPPLIERS SHALL BE IN COMPLIANCE WITH THE MOST CURRENT EDITION OF THE HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION AND WHERE APPLICABLE THE NATIONAL PRECAST CONCRETE ASSOCIATION.

2. A MINIMUM 3,000 PSI 28-DAY COMPRESSION STRENGTH CONCRETE SHALL BE USED.

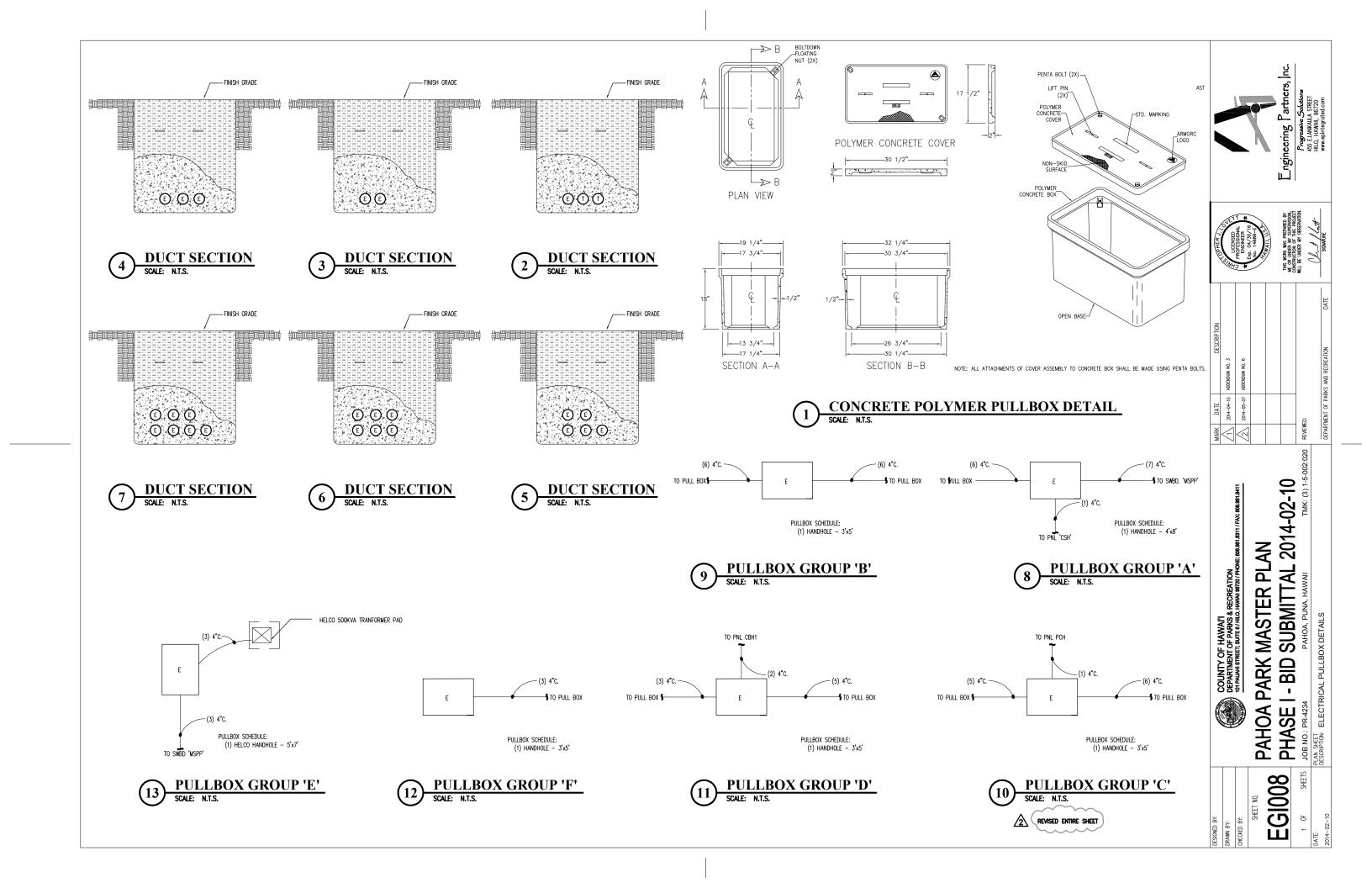
3. EACH FOUNDATION SHALL NOT BE HANDLED OR TRANSPORTED UNTIL AT LEAST 80% OF THE 28-DAY CONCRETE SUPPRESSION STRENGTH HAS BEEN REACHED.

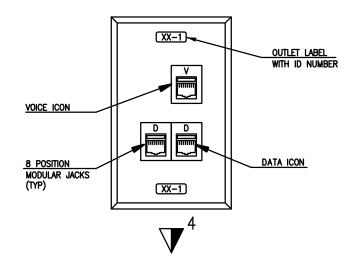
4. EACH FOUNDATION SHALL NOT BE INSTALLED UNTIL THE 28-DAY CONCRETE COMPRESSION STRENGTH HAS BEEN ACHIEVED.

2'-0" SIDE

5. CLSM OR EQUIVALENT SHALL BE USED TO BACKFILL AROUND EACH FOUNDATION.



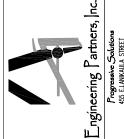






TELECOMMUNICATIONS GENERAL NOTES

- CONDUIT INSTALLATION SHALL BE IN STRICT COMPLIANCE WITH TIA/EIA 569. CABLE INSTALLATION SHALL BE IN STRICT COMPLIANCE WITH TIA/EIA 568 B.1 B.2 B.3.
- 2. TELECOMMUNICATION GROUNDING SYSTEM SHALL CONFORM TO TIA/EIA 607.
- 3. ALL CABLING, PATHWAY, GROUND BUSES AND TERMINATION HARDWARE, RACKS AND CABINETS SHALL BE PROVIDED WITH IDENTIFICATION (LABELING) IN ACCORDANCE WITH THE TIA/EIA 606.
- ALL EMPTY RACEWAY SYSTEM SHALL HAVE #12 PULLWIRE OR EQUAL AND SHALL BE IDENTIFIED AT ALL JUNCTION, PULL AND TERMINATION POINTS, USING PERMANENT METALLIC TAGS. TAG SHALL INDICATE INTENDED USE OF CONDUIT, ORIGINATION AND TERMINATION POINTS OF EACH INDIVIDUAL CONDUIT.
- CONTRACTOR SHALL PROVIDE LISTED FIRESTOPPING FOR ALL TELECOMM/LOW VOLTAGE CONDUITS AND CABLES, REFER TO SPECIFICATIONS.
- 6. ALL FIBER OPTIC CABLE WILL BE INSTALLED IN INNERDUCT. SEE CABLE SCHEDULE FOR INNERDUCT
- ALL TELEPHONE TERMINAL BACKBOARDS SHALL BE 3/4"x8"(H) VOID FREE FIRE RETARDANT AC PLYWOOD. LENGTH SHALL BE AS INDICATED ON PLAN.
- CONDUIT/PATHWAY ROUTING INDICATED ON DRAWINGS IS FOR GENERAL REFERENCE ONLY. CONTRACTOR SHALL FIELD COORDINATE AND VERIFY EXACT ROUTING AS REQUIRED.
- 9. CONTRACTOR SHALL MAINTAIN SEPARATION FROM ELECTRICAL FEEDERS, ELECTRONIC BALLASTS, TRANSFORMERS, ETC. TO MINIMIZE ELECTRO-MAGNETIC COMPATIBILITY ISSUES.
- 10. ALL CONDUIT INDICATED ON THE TELECOMMUNICATION DRAWINGS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. TELECOMMUNICATIONS CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR FOR ROUTING AT CONDUITS TO ENSURE TIA/EIA DISTANCE STANDARDS ARE NOT EXCEEDED
- 11. ALL CABLING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. EMT FITTING SHALL BE MALLEABLE IRON OR STEEL. CONNECTORS SHALL BE INSULATED THROAT TYPE.
- 12. CONDUIT GREATER THAN 1 1/4" WILL REQUIRE J-BOX SIZED PER NEC SECTION 370-28.
- UNLESS SPECIFICALLY INDICATED OTHERWISE, CONDUIT SHALL NOT EXTEND FROM TR TO MORE THAN FOUR OUTLET BOXES.
- 14. BEND RADIUS OF CONDUIT LESS THAN 2"=6 TIMES INTERNAL CONDUIT DIAMETER, GREATER THAN 2"=10 TIMES INTERNAL CONDUIT DIAMETER.
- 15. ANY RUN WITH MORE THAN 2 90' BENDS REQUIRES A PULL BOX PER 2 BENDS. PULL BOXES MAY NOT BE USED IN PLACE OF BEND. J-BOX REQUIRED IF RUN IS MORE THAN 100 FEET.
- 16. ALL CABLING SHALL BE COMPLETE, OPERABLE, TESTED (END TO END) IN ACCORDANCE WITH THE
- 17. WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL AND NATIONAL
- 18. ALL LOW VOLTAGE SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L. OR OTHER RECOGNIZED TESTING FACILITY.
- 19. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.
- 20. CONTRACTOR SHALL REFER TO SPECIFICATION FOR ADDITIONAL PROJECT REQUIREMENTS.
- 21. ALL CABLES INSTALLED IN CONDUIT IN OR UNDER A CONCRETE SLAB SHALL BE LISTED AND LABLED FOR WET LOCATION INSTALLATIONS.
- 22. ALL CABLING/MEDIA ROUTED IN CEILING AND OTHER ENVIRONMENTAL AIR HANDLING PLENUMS SHALL BE PLENUM RATED. IF A SPECIFIC LOCATION IS UNCLEAR WITH RESPECT TO PLENUM OR NON-PLENUM ENVIRONMENT, REQUEST CLARIFICATION PRIOR TO PROCEEDING WITH INSTALLATION.









SUBMITTAL 2014-02-10 PAHOA, PUINA, HAWAII **PLAN**

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